

TOP SECRETCONTROL NO. TCS-11394/70

BOOTLEG

REFERRED TO OFFICE	RECEIVED			RELEASED		SEEN BY	
	SIGNATURE	DATE	TIME	DATE	TIME	NAME & OFFICE SYMBOL	DATE

Handle Via Indicated Controls

TALENT-KEYHOLE

.....

.....

.....

.....

Declass Review by NIMA/DOD

WARNING

This document contains information affecting the national security of the United States within the meaning of the espionage laws U. S. Code Title 18, Sections 793 and 794. The law prohibits its transmission or the revelation of its contents in any manner to an unauthorized person, as well as its use in any manner prejudicial to the safety or interest of the United States or for the benefit of any foreign government to the detriment of the United States. It is to be seen only by personnel especially indoctrinated and authorized to receive information in the designated control channels. Its security must be maintained in accordance with regulations pertaining to TALENT-KEYHOLE Control System.

TOP SECRET

GROUP 1
Excluded from automatic
downgrading and declassification

TOP SECRET

TCS-11394/70
4 December 1970

Copy _____

MEMORANDUM FOR: Chief, Technical Services Group, NPIC

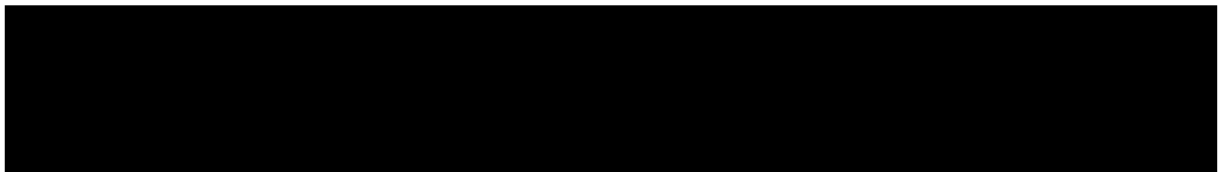
ATTENTION : Chief, PPS/TSG

SUBJECT : RED Monthly Report on Significant Events
(November 1970)

Significant Items of Interest for November 1970:

1. Target Indexing Device [REDACTED] - The TID was delivered to NPIC on 25 November 1970. It is currently being reassembled in Room 2N617 by contractor personnel. After reassembly, the device will be undergoing test and evaluation and simulated operational tests. Actual operational tests will begin upon receipt of first mission film. 25X1A

2. Utility of Stereo Scanning [REDACTED] - Final reports were delivered in November and are currently being evaluated. The data in these reports will be used to evaluate the feasibility of continuing the development of the Automated Stereo Scanner. The latter is undergoing an engineering audit by [REDACTED] 25X1A
25X1D
25X1A



4. High Precision Stereocomparator (HPSC) - Part 1 of the Pre-acceptance Tests for this instrument were performed at the [REDACTED] plant by NPIC personnel from 17-19 November 1970. This part of the test covered the technical specifications and parameters for the HPSC. The instrument met all major specifications. Part 2, covering the operational suitability of the instrument, will take place in December. 25X1A

5. Scan & Search P.I. Station - Work is progressing slightly ahead of schedule on this project. [REDACTED] the optical subcontractor, reports that the optical fabrication is going along very well. 25X1A

6. Step and Repeat Printer - RED/TSG and PSG met with [REDACTED] (the contractor) on this program. Guidance was provided on format size, scan angle marks, etc., of planned operational imagery. 25X1A

GROUP 1
Excluded from automatic
downgrading and
declassification

TOP SECRET

HANDLE VIA
TALENT-KEYHOLE
CONTROL SYSTEM ONLY

TOP SECRET

TCS-11394/70

SUBJECT: RED Monthly Report on Significant Events (November 1970)

7. Research in Mensuration Instruments - The contractor demonstrated the progress made on the Automated Pointing Task of this program. RED/TSG and PHD/IEG personnel viewed the bench setup used with imagery and were quite impressed with the results.

8. 1540 Light Table - Engineering and operational tests were performed at the [REDACTED] plant on several occasions during the month of November. Several deficiencies were surfaced and corrected by the contractor. The technical monitor ran additional tests on 28 and 30 November and feels that the table is technically acceptable. RED/TSG and IEG will perform operational suitability tests on the table at [REDACTED] on 1 December 1970.

9. 8" x 10" Camera [REDACTED] 8" by 10" Camera was obtained from the manufacturer for NPIC evaluation from 2-6 November 1970.

10. Heat Processor [REDACTED] - A new proprietary heat processor has been obtained on loan from the [REDACTED]. This will be evaluated throughout the Center for use with Heat-Processed Diazo and daylight dry silver materials.

11. Calibration Device - Phase 1 of the development of a calibration device for the HPSC has been completed and the experimental prototype shows definite promise. Paper work is in progress for the approval of Phase 2 to fabricate the actual prototype device.

12. Sensitometric Processor - [REDACTED] visited SPPF, Westover Air Force Base, to witness the acceptance tests of the [REDACTED] Sensitometer Processor purchased by the Air Force. As a result of this visit, the specifications of the NPIC sensitometric processor were defined and an agreement reached with [REDACTED] to build its processor for a total cost of [REDACTED].

13. Unconventional Film Testing [REDACTED] visited NPIC to discuss a contract for testing unconventional films. [REDACTED] is well equipped in this area, and has tested several unconventional films for laser recording systems. Three reports on in-house [REDACTED] work in this area were received. A proposal has been requested.

14. Color Gamut Program [REDACTED] has written a [REDACTED] program that saves a significant amount of time in reducing density values required for the Color Gamut Program.

HANDLE VIA
TALENT-KEYHOLE
CONTROL SYSTEM ONLY

2
TOP SECRET

TOP SECRET

TCS-11394/70

SUBJECT: RED Monthly Report on Significant Events (November 1970)

25X1A 15. Color Training Program [REDACTED] - Agency TS clearances were granted [REDACTED] personnel during the reporting period. Plans are underway to begin an extensive Center familiarization program for them in support of the color training contract. A memorandum specifying the nature and extent of the support has been sent to all Group Chiefs.

25X1A

25X1A 16. Program Review [REDACTED] - A three-day NPIC [REDACTED] Panel program review was held in Seattle. Results from the FY-69/70 program were evaluated. The FY-71 program was reviewed and modified, as appropriate.

25X1A

25X1A 17. Advanced PI Viewer Development [REDACTED] - Contractor representatives held extensive discussions with [REDACTED] (NPIC optics consultant), as well as with ATB/RED and IEG personnel, regarding the development of an advanced PI viewer.

25X1A

25X1A

25X1A 18. UV Exposure Criteria Evaluation [REDACTED] - That portion of the Human Engineering Design Guide (HEDG) concerning recommended exposure levels to ultraviolet radiation has been submitted to OMS for review and evaluation. Distribution of the revised HEDG is delayed pending receipt of the evaluation.

25X1A

25X1A 19. OSI - NPIC Stereo Acuity Research Program - [REDACTED] Life Sciences Division/OSI, and [REDACTED] HPS/RED, have completed preliminary plans to conduct an experiment to assess the influence of age and experience as a microscopist on stereo acuity. The experiment, for [REDACTED] master's thesis [REDACTED] also satisfies an NPIC vision testing program requirement. The study will employ Center photointerpreters as well as new non-PI Agency employees. In addition, the laser optometer developed by Dr. [REDACTED] (NPIC human factors consultant) will be used to assess the refractive state of the observers' eyes. The stereo acuity test developed by [REDACTED] personnel will constitute the visual stimulus, the first time it will have been used on Center PI's.

25X1A

25X1D

25X1A 20. Contact Lens Evaluation - [REDACTED] ATB and [REDACTED] personnel developed a program to evaluate the feasibility of a large scale contact lens prescription program for PI's who will use the Wide-Field Stereo Viewer.

25X1A

25X1A 21. EOI Imagery Evaluation - The final report of a study by OSP, NPIC, and [REDACTED], to evaluate simulated EOI imagery was submitted to the Executive Director, NPIC.

TOP SECRET

HANDLE VIA
TALENT-KEYHOLE
CONTROL SYSTEM ONLY

TOP SECRET

HANDLE VIA
TALENT-KEYHOLE
CONTROL SYSTEM ONLY

TCS-11394/70

SUBJECT: RED Monthly Report on Significant Events (November 1970)

22. Image Manipulation Research Laboratory - The Scanner and display components have been installed in Room 4N807. Detailed testing is in progress and will be completed in January 1971. Experiments will be performed in conjunction with the OCS computer.

25X1A

23. Digital Image Manipulation (DIM) - This contract with [REDACTED] ends in November. The information extraction experiments met their objectives. Results on the manipulation of operational imagery have not been received, but should be promising enough to justify another year of support. The final report will include a detailed historical summary of the entire five-year project.

25X1A

25X1A

24. Herd Criterion - [REDACTED] delivered data showing the effects of the Herd Criterion on one-dimensional, edge trace data; the results are promising. [REDACTED] personnel are working on two-dimensional image data. The contract will be completed 31 December 1970.

25X1D

25. Power Spectral Density, Quality Measure [REDACTED] - The initial tests of the ability of this technique to rank imagery in the same order of quality as human observers were very successful. The MIP set was ranked properly except for one image, and the TID selected the best focus image out of 30, each varying by 0.0005". Final experiments are underway. The contract will be completed in December 1970.

25X1A

27. Proposals, Contracts, and Reports

- a. A proposal for a laboratory feasibility test to retrieve information from overexposed film was received from Technical Operations. It is being evaluated.
- b. Proposals have been received from the [REDACTED] for: a PI Print Out Station; a Compact, High-Speed, Roll-Film Processor; and a Dry Color Program. These are all based on the previous work in dry silver technology.

25X1A

TOP SECRET

HANDLE VIA
TALENT-KEYHOLE
CONTROL SYSTEM ONLY

TCS-11394/70

SUBJECT: RED Monthly Report on Significant Events (November 1970)

c. Proposals and reports evaluated:

1. [REDACTED], unsolicited proposal, Scanning Rear Projection Viewer.
2. [REDACTED] unsolicited proposal, Supra Additive Color Enhancing Film Viewer.
3. [REDACTED], Development of Specifications for an Audio Clueing Information System - evaluation completed.
4. Beneficial suggestion, Teletype Console Paper Display and Feed - evaluation completed.
5. ESD/TEB Memo Test Report on Computer Center Sound Level - evaluation completed.
6. [REDACTED] unsolicited letter proposal to Establish the Intelligence Value of Color Photography - evaluation in progress.
7. [REDACTED] unsolicited letter proposal for Enhancing Human Performance on Complex Perceptual Tasks - evaluation in progress.
8. [REDACTED] Evaluation of Four Image Manipulation Techniques for Photointerpretation - evaluation in progress.
9. [REDACTED] Analysis of the Study of the Utility of Stereo Scanning - evaluation in progress.
10. U.S. Arms Control and Disarmament Agency, Aerial Surveillance Imagery Interpretation Support Program - evaluation in progress.

d. Contracts:

1. [REDACTED] Grant Program - The PAR was approved by the DDI. It should be formally issued by 27 November 1970.

5
TOP SECRET

HANDLE VIA
TALENT-KEYHOLE
CONTROL SYSTEM ONLY

TOP SECRET

TCS-11394/70

SUBJECT: RED Monthly Report on Significant Events (November 1970)

d. Contracts: (cont.)

2. Photoscience Support - The PAR was approved by D/NPIC. It should be issued formally in December.

3. [REDACTED] The Color Technology Implementation Contract for [REDACTED] was signed off.

4. A request for a follow-on contract with [REDACTED] [REDACTED] has been forwarded to Chief, Personnel Branch.

e. The final VHR Working Group Report was published and distributed. COMIREX reception was favorable.

28. [REDACTED] - This strategic [REDACTED] evaluation project gained considerable mention. [REDACTED] provides the NPIC project officer. Progress is steady, but not without minor problems. The targeting is nearly complete after a full two weeks of work. Photogrammetric studies are underway, and tentative time schedules have been established.

29. Briefings and Consultations:

a. [REDACTED] participated in several working sessions with Mr. [REDACTED] regarding a special project, and a briefing was given to the Office of the Director, NPIC.

b. The NPIC [REDACTED] [REDACTED] ad hoc study group was re-activated and encouraging progress is being made.

c. [REDACTED]

d. [REDACTED] presented lectures on Geometrical Optics and, in December, will continue to examine photometry. These lectures have been well received and attended. Members of RED, APSD, ESD, and TSD/DDP are participating.

e. [REDACTED] presented a day long briefing and consultation on their free radical film. [REDACTED] was quite open in his discussions of the mechanisms by which this unconventional material functions. His inputs added significantly to our knowledge of this material.

TOP SECRET

TALENT-KEYHOLE

CONTROL SYSTEM ONLY

TOP SECRET

TCS-11394/70

SUBJECT: RED Monthly Report on Significant Events (November 1970)

- f. [REDACTED] briefed C/RED and C/APSD on the Color [REDACTED] Report.
- g. [REDACTED] ATB personnel assisted TEB/ESD in designing an experiment to evaluate a new reticle design.
- h. RED personnel met with representatives from PSG to discuss microfiling the human factors research reports--a prelude to a proposed division-wide document storage and retrieval program.
- i. [REDACTED] NPIC Color R&D Program Briefing - ATB personnel briefed [REDACTED] R&D management on the Center's color R&D program. [REDACTED] Project Director for intelligence related research, requested and was granted permission to submit a letter proposal outlining [REDACTED] thoughts relative to the establishment of the intelligence value of color.

30. Training:

- a. [REDACTED] is attending the in-house reading improvement course.
- b. [REDACTED] is attending an Intelligence Briefing Course through 4 December 1970.

[REDACTED]
Deputy Chief,
Research & Engineering Division,
TSG/NPIC

TOP SECRET

HANDLE VIA
TALENT-KEYHOLE
CONTROL SYSTEM ONLY

NPIC/TSG/RED: [REDACTED] 12/4/70 [REDACTED]